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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,130	10/06/2003	Fumiya Nagai	01-468	1775
23400	7590	03/06/2006	EXAMINER	
POSZ LAW GROUP, PLC 12040 SOUTH LAKES DRIVE SUITE 101 RESTON, VA 20191			ROGERS, KRISTIN D	
			ART UNIT	PAPER NUMBER
			3736	

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/678,130

Applicant(s)

NAGAI ET AL.

Examiner

Kristin D. Rogers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-10, 15-16, and 21-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakai et al. (4765340). In regard to claims 1 and 21, Sakai et al. shows an abnormal respiration detecting system and method comprising sensing means 2 (4,6), signal detecting means 10, respiratory condition determining means (28) 18a, 18b, 22a, and 22b, and abnormal respiration detecting means 30. In regard to claims 2 and 22, the sensing means 2 (4,6) senses a sphygmocardiographic signal 32 and the respiratory condition determining means calculates a pulse rate and an amplitude of a pulse wave from the sphygmocardiographic signal 32 (column 3 lines 64-68 and column 4 lines 1-2). In regard to claims 3 and 23, the respiratory conditioning determining means (28) 18a, 18b, 22a, and 22b, calculate the ratio between the pulse rate and the amplitude of the pulse wave (column 3 lines 48-68 and column 4 lines 1-2). In regard to claims 4 and 24, the sensing means 2 (4,6) senses a sphygmocardiographic signal and the respiratory condition determining means calculates a respiratory curve from the sphygmocardiographic signal and a

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respiration rate from the respiratory curve 28 and 36 (column 3 lines 64-68 and column 4 lines 1-7). In regard to claims 5-7 and 25-28, the sensing means 2 (4,6) and the respiratory condition determining means calculates a respiratory curve from the sphygmocardi signal and determines if apnea is present (column 3 lines 64-68 and column 4 lines 1-25) and the abnormal respiration detecting means 30 detects abnormal respiration based on the determination of apnea. In regard to claim 8, the abnormal respiration detecting means 30 detects abnormal respiration based on a variation in the pulse rate (column 4, lines 3-8). In regard to claims 9 and 29, The sensing means 2 (4,6) senses a signal indicative of saturated oxygen (SaO_2), the respiratory condition determination means (28) 18a, 18b, 22a, and 22b, in addition to abnormal respiration detection means 30 calculate the saturated oxygen to detect apneic period (column 4, lines 3-26). In regard to claims 10 and 30, abnormal respiration rating is made by display unit 44 rates each abnormal condition and stores each condition in storing unit MO and an overall abnormal respiration rating means 44, 40 and 30 rate an overall abnormal respiration, warning means 46 produces warning of abnormal respiration determined from respiratory condition determining means (column 4, lines 26-46). In regard to claims 15-16, abnormal respiration detecting means 30 comprises programming unit CPU and storing unit MO.

3. Claims 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Turcott. Turcott shows sensing device with optical pulse wave sensor and optical pulse oximeter emitting blue green and red light 48, 50, and 52 (column 11, lines 1-31). In regard to claims 18-19, Turcott shows light emitting device 70, photoreceptor 72 with

light emitting device having wavelength characteristics showing two peaks; first peak at 456nm and second peak at 565nm. In regard to claim 20, the pulse wave sensor and optical pulse oximeter are integrally constructed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. in view of Amano et al. (6081742) and Reents (4895160). Sakai et al. shows optical pulse wave sensors 4 and 6 of varying wavelengths, but lacks disclosure of the color of the wavelength of the light emitting device. Amano et al. teaches a device for

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measuring a patient's pulse rate using pulse wave sensor 102 employing blue light emitting diode 32 (Figure 3). Reents teaches a display device 101 for measuring the pulse rate with green light emitting diode 102 (Figure 7). Therefore it would have been known to one having ordinary skill in the art at the time of the invention to modify Sakai et al. with optical pulse sensors emitting varying wavelengths as taught by Amano et al. and Reents for the purpose of providing an optical pulse wave sensors that emitted blue and green light.

7. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. and Amano et al. and Reents as applied to claim 11 above, and further in view of Turcott (6997879). Sakai et al., Amano et al. and Reents show a device for measuring abnormal respiration including two light emitting pulse wave sensors as cited above. All lack teaching the light-emitting element displaying two peaks at 440nm and 550 nm and a red light and infrared light source and a program for executing such. In regard to claims 12-13, Turcott teaches light emitting device 302 having emitting wavelength characteristics that show two peaks; first peak 456nm and second peak 565nm which are approximately 440nm and 550nm as stated in the claimed invention. Therefore it would have been obvious for one having ordinary skill in the art at the time of the invention to modify Sakai et al., Amano et al. and Reents with light-emitting element displaying two peaks as taught by Turcott since such modification would provide peak readings at 440nm and 550nm as cited in the claimed invention.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. in view of Turcott. Sakai et al. shows optical pulse wave oximeters, but lacks

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disclosure of the color of the wavelength. Turcott teaches optical pulse wave oximeters with light emitting red and infrared wavelength (Figure 14). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Sakai et al. with optical pulse wave oximeters with light emitting red and infrared wavelength as taught by Turcott for the purpose of providing red and infrared wavelength indication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristin D. Rogers whose telephone number is 571.272.7293. The examiner can normally be reached on Monday through Friday 8:00am - 4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571.272.4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KDR


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